

THERAPEUTIC GLOVE APPARATUS

1 BACKGROUND OF THE INVENTION

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3 The present invention relates to a therapeutic
4 glove and especially to a therapeutic glove for the
5 application of heat or cold to a person's hand while
6 exercising the hand.

7 A variety of therapeutic hand and exercising
8 devices have been provided in the past as well as
9 various devices for heating and cooling a person's
10 hand. Prior patents which provide therapeutic gloves
11 or the like include the Hensey U.S. Patent No.
12 5,297,541 for an athletic therapeutic glove for
13 exercising the muscles of the fingers, hands, and
14 wrists and forearms. It is fabricated from a flexible
15 material and has a plurality of elongated tube-shaped
16 elastomeric bladders which are pressurized with air.
17 The Matsumura et al. U.S. Patent No. 5,259,369 is a
18 remedial device for hand insufficiency and has a
19 plurality of air sacks inflatable with compressed air.
20 The Cronin U.S. Patent No. 4,173,218 is a glove splint
21 for an arthritic hand and has a glove-like envelope
22 filled with a fluid for encapsulating the hand, thumb
23 and fingers to provide a shock absorbing buffer to the
24 hand. The Cronin U.S. Patent No. 4,706,658 is a glove
25 splint which has a glove-like envelope which is filled
26 with fluid to encapsulate the hand. The Matsumura et
27 al. U.S. Patent No. 5,333,605 is a remedial device for
28 hand insufficiency which uses compressed air inflating
29 air sacks in the first and second bag bodies covering
30 the hand. The Reynolds et al. U.S. Patent No.
31 5,537,688 is a hand covering with vibration reducing
32 bladder and includes a plurality of cells forming a
33 bladder which are filled with air or a compressible

1 fluid. The Fuson U.S. Patent No. 3,741,207 is a hand
2 restraining mitt which includes a chamber either
3 inflated with air or filled with a resilient block of
4 foam-like material to conform to the natural curvature
5 of the wearer's hand.

6 The present invention advantageously includes a
7 therapeutic glove having a plurality of bladders
8 formed therein and filled with a viscous material,
9 such as a fluid clay material, which advantageously
10 can be heated or cooled for applying heat therapy to
11 the hand while providing an exercise medium for
12 bending and squeezing the clay filled glove.

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14 SUMMARY OF THE INVENTION

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16 A therapeutic glove apparatus has a first glove
17 half formed of a flexible material and shaped to cover
18 one side of a person's hand and has a bladder broken
19 into cells and filled with a viscous liquid, such as
20 a fluid clay material. A second glove half is formed
21 of a flexible material and shaped to cover the other
22 side of a person's hand and is movably attached to the
23 first glove half and also has a bladder having a
24 plurality of cells formed therein filled with a
25 viscous material, such as a fluid clay. Attaching
26 straps have hook and loop material thereon for
27 attaching the first and second glove halves for
28 removably attaching a therapeutic glove over a
29 person's hand. The therapeutic glove allows a person
30 to exercise the muscles of the hands, fingers, and
31 wrists by movement against the resistance of clay
32 while applying heat or cold to a person's hand.

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1 BRIEF DESCRIPTION OF THE DRAWINGS

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3 Other objects, features, and advantages of the
4 present invention will be apparent from the written
5 description and the drawings in which:

6 Figure 1 is a perspective view of a therapeutic
7 glove in accordance with the present invention;

8 Figure 2 is a perspective view of the therapeutic
9 glove of Figure 1 partially opened for placement on a
10 person's hand;

11 Figure 3 is a perspective view of the therapeutic
12 glove of Figures 1 and 2 having a person's hand being
13 inserted; and

14 Figure 4 is a sectional view taken through the
15 therapeutic glove of Figures 1-3 having a person's
16 hand therein.

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18 DESCRIPTION OF THE PREFERRED EMBODIMENT

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20 Referring to the drawings of Figures 1-4, a
21 therapeutic glove 10 is illustrated having a top glove
22 half 11 and a bottom glove half 12 which glove halves
23 are connected with a flexible hinge 13. The upper
24 half 11 and the bottom half 12 are bound together with
25 heat welding or the like at strips or voids 14 to form
26 fingers for the glove but also to break up the
27 internal bladder 15 of the upper half 11 and the
28 internal bladder 16 of the bottom glove half 12. The
29 breaking up of the internal bladder 15 and 16 into
30 cells with buffers also impairs the flow and
31 accumulation of viscous fluid 17 in the bladder 15 and
32 the viscous fluid 18 in the bladder 16 by providing
33 resistance to the movement of the fluid in the glove.

1 The glove portion 20 as seen in Figure 2 can be raised
2 for sliding the hand in, as seen in Figure 3. Once
3 the hand is slid in, as shown in Figure 4, a plurality
4 of attaching straps 21 each having a piece of hook and
5 loop material 22 thereon, are attached together. The
6 glove top half 11 has a piece of hook and loop
7 material 23 for attaching to each piece of hook and
8 loop material 22. Each strap 21 hook and loop
9 material 22 is aligned with one piece of hook and loop
10 material 23 so that the bottom glove half 12 can be
11 strapped to the top glove half 11, as shown in Figure
12 1, and then adjusted for a particular person's hand.
13 The glove also has a plurality of buffer portions or
14 cells 24 separated by void areas 19 and 29 which are
15 formed by welding portions of the flexible material 25
16 to the flexible bottom material 26 of the upper glove
17 half 11. Similar cell shapes can be formed in the
18 bottom glove half 12. Each of the straps 21 has a
19 flexible hinge 27 binding it to the glove bottom half
20 12 so that the glove can be easily formed of flexible
21 materials forming upper glove half and bottom glove
22 half bladders which are broken into bladder sections
23 and which can be permanently filled with the viscous
24 material 17 and 18, as shown in Figure 4. This
25 material is permanently sealed within the bladder
26 portion and may be a fluid clay, such as clay having
27 water or other liquid in it to make it moveable. This
28 advantageously allows the glove to be heated or cooled
29 prior to placing on a person's hand for the
30 therapeutic value of the heat and also allows for
31 exercising the hand by the movement of the fingers,
32 wrist, and hand. Movement of the hand exercises the
33 muscles of the fingers, hand and wrist by the

1 squeezing of the clay, such as the commercially
2 available hand exercising devices shaped like balls
3 with flexible exteriors and having a heavy viscous
4 material thereinside.

5 It should be clear at this time that a
6 therapeutic glove apparatus has been provided.
7 However, the present invention should not be construed
8 as limited to the forms shown which should be
9 considered illustrative rather than restrictive.